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THE CONCEPT OF VALUE FURTHER CONSIDERED

SUMMARY

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I

IN what follows, I shall regard myself more as Professor Clark's collaborator in a symposium than as his opponent in a debate. At certain points I shall definitely join issue with him, at certain points I shall build upon

his analysis, and I shall try to answer the questions he raises as to the implications of the social value theory. But I shall allow myself a wider range than the topics specifically raised by him, because I do not think that he has included enough considerations to furnish a solution to his problem. I welcome the opportunity which his criticism of some of my doctrine gives to go over the ground again, taking account not only of his views, but also of the views of some other critics.

At the outset, I concur with Professor Clark in the view that it is well to divorce as far as possible the terminological, formal, and logical aspects of the question from the more important questions of causation. This distinction is emphasized in my *Social Value*. I shall give the major part of my attention to arguments drawn from considerations of logic and scientific method, rather than to arguments based on my own general theory of value. That the two problems cannot be entirely divorced, however, is well enough illustrated in Professor Clark's own paper, particularly in the following (p. 672): "We think of a bushel of wheat having exchange value before it is sold. But so far as this quality, or relation, to which the sale gives a quantitative measure, is *the result* [italics mine] of previous sales of other bushels and of the whole state of mind of the people concerned that has grown out of settled habits of exchange, it would hardly seem worth debating which comes first in the social scheme of things. It is much like the question of the relative priority of the chicken and the egg." If I could accept this as a theory of the *causes* governing the value of the bushel of wheat, I might find it easier to concur in Professor Clark's view as to the definition of value. But I do not believe that the passage contains, even in embryo, an adequate theory of the causes governing values.

The history of prices, and the settled habits of exchange, do not seem to me particularly significant elements out of which to construct a theory of value. But my chief concern at present, as Professor Clark's, lies in the formal and logical aspects of the value concept, to which I now turn.

II

The notion of value as relative is Protean. Or perhaps, since old Proteus *was*, somehow, the same individual despite his many forms, it is better to say that many different notions, having different philosophic roots, go by the name of the relative conception of value. One root is the psychological doctrine that feelings can exist in the mind only if in contrast with something else — the contrast being made more fundamental than the feelings contrasted. A single feeling is an impossibility. This doctrine lies at the root of Simmel's theory of relativity, and has been made some use of by Professors Seligman and Pantaleoni. I have dealt with this type of doctrine elsewhere,¹ and for the present shall simply say that I regard the doctrine as psychologically untenable,² and that I do not consider the inference drawn from it with reference to the nature

¹ Social Value, pp 19-20, n , and ch 10

² Cf William James' criticism of the contention that "semper idem sentire ac non sentire" are the same "The Relativity of Knowledge," held in this sense, it may be observed in passing, is one of the oldest of philosophic superstitions. Whatever facts may be cited in its favor are due to the properties of nerve-tissue, which may be exhausted by too prolonged an excitement. But if we physically could get such a feeling that should last eternally unchanged, what atom of logical or psychological argument is there to prove that it would not be felt as long as it lasted, and felt for just what it is, all that time?" The Meaning of Truth, p 4, n. Cf, also, James' Principles of Psychology, II, pp 9 ff. Knowledge, I should maintain, is relative only when it is "knowledge-about." "Knowledge of Acquaintance" is absolute, i e, is a term of the "knowledge-about" relationship. Cf James' Principles of Psychology, vol 1, pp 221, 222. Cf, also, Dewey's Studies in Logical Theory, chs 1-4, esp ch 3. I am content to rest my view of the matter on authority here, noting that Bergson's view is essentially the same as that of James and Dewey. (Time and Free Will, passim.) All three of these thinkers need terms before they can talk about relations.

of value a proper inference even if the doctrine were sound.

More commonly the doctrine has its roots in geometrical conceptions. Values are treated like spatial magnitudes, which are measured by comparison with other spatial magnitudes, and the argument for the relativity of values runs on all fours with the argument for the relativity of space.

In a recent brilliant article, the French philosophical physicist, Poincaré,¹ maintains the thesis that if all dimensions were doubled, we should not know it. Houses would be twice as high, but then foot-rules would be twice as long, and all things would remain in the same relation to one another as before. Whence, he concludes, the relation is the all important thing. Absolute distance is a chimaera. Now this notion is subject to the criticism that it confuses existence with knowledge of existence, and confuses quantity with measurement of quantity. Moreover, in its very statement, it assumes absolute distance: it assumes an absolute distance to be doubled. But we do not need these considerations to dispose of the doctrine. The proposition that we should not know that such a change

¹ "The Relativity of Space," *Monist*, April, 1913 "Suppose that in the night all the dimensions of the universe became a thousand times greater, the world will have remained *similar* to itself, giving to the word *similitude* the same meaning as in Euclid, Book VI Only what was a meter long will measure thenceforth a kilometer, what was a millimeter long will become a meter The bed whereon I lie and my body itself will be enlarged in the same proportion When I awake tomorrow morning, what sensation shall I feel in the presence of such an astounding transformation? I shall perceive nothing at all The most precise measurements will be incapable of revealing to me anything of this immense convulsion, since the measures I use will have varied precisely in the same proportion as the objects I seek to measure In reality, this convulsion exists only for those who reason as if space were absolute If I for a moment have reasoned as they do, it is in order the better to bring out that their way of seeing implies contradiction In fact it would be better to say that space being relative, nothing at all has happened, which is why we have perceived nothing (p 163)" It will be noticed that Poincaré repudiates at the end of this quotation the assumption that an absolute space has been altered, but it is only by making that assumption that he could even state his argument And the same assumption recurs at every point in the whole of the article The very notion of relativity is meaningless and *unstable* except as there are assumed absolute terms for the relations

had been made, that such a change would make no difference in the relations among things, is true only so long as we confine attention to the purely geometrical qualities of things — to space relations. Introduce any other qualities, and trouble arises. Imagine, *e. g.*, a ball of lead suspended by a wire of lead which is just strong enough to hold it up. Now double all dimensions: the diameter of the lead ball, the diameter of the lead wire, the length of the lead wire, the diameter of the earth — will not the wire snap and the ball fall to the ground? ¹ The doctrine is thus not true when gravitation is added to space relations. Add more complex qualities to the consideration, the varying properties of different substances, the delicate adjustments within the bodies of biological organisms, the complexities of psychological and social phenomena, and the doctrine is reduced to mere trifling. It is a notion with which a geometrician may play, but which has no business in the social sciences.

The parallel argument with reference to values is, of course, that values are known only through prices, exchange relations; that, therefore, if prices should remain constant, but all values be cut in half, or multiplied by two, we should never know it, that therefore the assertion that values have changed in absolute magnitude while prices have remained the same is meaningless. Something of this sort seems to be involved in Professor Clark's argument, as for instance in the passage quoted above, and in the paragraph which

¹ Professor F C Becker, of the Department of Philosophy in Western Reserve University, in an article which he has not yet published, has worked out a complete refutation of Poincaré along this line, showing any number of derangements in the existing physical order that a doubling of dimensions would occasion. One such illustration might be drawn from the peculiarity of light waves mentioned by Poincaré himself on p 164 of his article. Professor W F Osgood suggests as an illustration the fact that a flea, if it became as big as an elephant, would find its jumping abilities sadly reduced in proportion, since weight increases in one ratio, and strength of tissue in another, with the increase in dimensions.

follows it, particularly the sentence, "The two concepts must behave alike, since one is *only known* [italics mine] through the other." But the reply is first that existence and knowledge are different things, and that the "relativity of knowledge" ¹ does not involve the same relativity in the thing known. And the second answer is that the argument, to be statable, must involve the assumption of absolute values *as changing*. And the third answer is even easier in the case of values than with reference to space, because values do significantly manifest themselves in other ways than in exchange, and are in other relationships than the exchange relationship. If, for example, all economic values should rise markedly, but in the same proportion, then men would give more thought and effort to the accumulation of wealth, and would concern themselves less about religious and other spiritual goods. For, after all, economic values affect the lives of men as well as affecting exchange relations among goods. I shall recur to this point later, in connection with the generalization of the notion of value to include legal, religious, moral, and other non-economic forces of social motivation and control. If one wishes, on the basis of an argument of this kind, to assert the relativity of values, one must broaden the value concept to include these other kinds of value. Economic values alone do not constitute a complete or self-contained system. But the argument would be easily confuted if it sought to develop the impossibility of knowing that a doubling of all kinds of values, non-economic and economic together, had taken place. Because such a doubling would manifest itself, not in a different distribution of men's activities, but in an intensification of all activities, and in greater intensities of consciousness of various

¹ See p 676, n , *supra*.

kinds. Unless Professor Clark wishes to challenge my contention that the essential function of values lies in their power in motivation, that the function ¹ of economic values is to guide and control the economic life of society, I do not see how he can avoid this conclusion. And here, I may indicate, is part of my answer to his analogy between "exchange value" and wood-chopping as the measure of strength (pp. 672, 673): exchange is one of the methods of measuring economic values, and, in a competitive society where there is free enterprise, and the like, it is the chief and most exact method; but it is not the *only* method. We have other tests, as just shown, which, if not ordinarily so exact and easily used, are really much more fundamental.

Another doctrine which goes by the name of the relativity of values rests on the contention that the psychological "energy of valuation" ² of an individual or a group is limited to a fixed amount, that therefore a rise in the value of one object must draw a corresponding amount of value from some other object, so that an increase in the aggregate of values is impossible. This notion, however, resembles but superficially the conceptions of relativity so far discussed. Instead of assuming that we know value magnitudes only through value relations, it assumes that we know all about the totality of value-magnitudes directly. And relativity here means, not dependence on exchange relations, but simply that particular values are related to a fixed sum of values as part to whole. With this notion I should have no quarrel on strictly logical grounds, but rather on psychological grounds which I need not here consider, as I have gone over the matter at length elsewhere.³

¹ Social Value, chs 10-11

² Vide, Baldwin's Dictionary of Philosophy, s v "Worth"

³ Social Value, ch. 16

A more remarkable formulation has recently come from Professor L. H. Haney,¹ "the relativity of unrelated and independent parts" — the relativity of the unrelated! In contrast with this, Professor Haney sets another phrase, "a social relativity," which is designed to convey his own conception. As I do not know what Professor Haney means by these expressions, I shall not discuss them, but I list them here to illustrate the multiplicity of turns that have been given to this versatile term, and in the hope that some future writer may clear up what I suspect to be a mixing of categories which ought to be "related" in a different way.

Certain writers have sought to rest the case for the relative notion on an arbitrary definition, on the assumption that usage has settled the matter once for all. Among these I might include a critic of my *Social Value*, M. M. Ansiaux, who, writing in French, criticizes my use of English in this particular.² The French "valeur" may well have a closer connection with the relative conception than has been the case with English "value" or German "Wert," but the association is not so universal even in French as to prevent Gabriel Tarde from using "valeur" as an absolute quality and quantity (a quantity being any quality which can mount or descend a scale without ceasing to be the same quality) independent of exchange relations. As

¹ "The Social Point of View in Economics, II," *Quarterly Journal of Economics*, February, 1914, p. 296

² Archives Sociologiques de l'Institut Solvay, Bulletin No. 21, May 25, 1912, pp. 949-955. "Préoccupé de faire de la *valeur* une notion sociale de premier ordre, Anderson rejette la définition des économistes. La valeur, dit-il, n'est pas une *relation*, c'est une *quantité*. Libre à lui, sans doute, de donner au mot un sens nouveau, il semblerait pourtant qu'un adepte de la sociologie dût se montrer moins 'individualiste' et manifester plus de respect pour l'usage reçu et d'ailleurs légitime. Le procédé est tout à fait arbitraire. Que dirait-on d'un naturaliste qui appellerait vertèbres les écailles d'une huître et en conclurait que l'huître est un vertébré, grande vérité méconnue par tous les savants passés et présents?"

"L'innovation d'Anderson est d'autant plus sujette à caution que le verbe *valour* (et en anglais l'adjectif *worth*) implique une comparaison." (P. 951)

to usage in English and German, I think no one has a right to dogmatize when Friedrich Wieser, Adam Smith, Ricardo, W. F. Lloyd, J. B. Clark, A. S. Johnson, L. S. Meriam, E. A. Ross, David Kinley, W. A. Scott, T. S. Adams, and W. G. L. Taylor,¹ to mention no others, have explicitly recognized the absolute notion, and have, with greater or less consistency, used the term in that way. That practically all economists have used the absolute notion, when they have got past the chapter on definition, as a necessary tool of thought, I have tried to show in *Social Value*.

III

I turn now to the more usual conceptions of relativity that one meets in current economic literature: "ratio of exchange," "power in exchange," "purchasing power," "*taux d' échange*," "*Tauschfuss*," "*Tauschkraft*." These terms, when used as equivalents of value, are not all identical by any means, but they have in common two corollaries: (1) the doctrine that a general rise or fall of values is impossible, since a rise in the value of good A means that B has gone lower in value with reference to A; and (2) the contention that if one piece of wealth existed alone, it could have no value, — that two goods, different in some particular (else no occasion for exchange would exist), must be present before value can be predicated of either of them. As against these doctrines, the absolute value concept would contend,

¹ The index of names in *Social Value* will give references to my discussion of the writers listed. Tarde, G., *Psychologie Économique*, vol. 1, pp. 63 ff. Johnson, A. S., "Davenport's Economics and the Present Problems of Theory," *Quarterly Journal of Economics*, May, 1914. See also *Am Econ Rev*, June, 1912, p. 320. Cf. Professor Davenport's discussion of the German use of "*Wert*," *Value and Distribution*, p. 296. The non-relative meaning is the usual meaning of "*Wert*," in Professor Davenport's judgment. "*Preis*" (not confined to money-price) is the more common term for value-relations, in German.

(1) that there can be a general rise or fall in values, with or without a change in exchange relations, and (2) that if only one piece or one kind of wealth existed, it would have value, and that value would function in the control of economic activity. To illustrate the last point, let us assume a society in the tropics where the bread-fruit tree is abundant, the water supply adequate, wants for other goods too slight to induce labor, except that one good, red cloth, can be produced from super-abundant vegetable resources without the use of tools, — no technical appliances being known. Would that red cloth have value? Assuredly. That value would induce economic activity. As that value rose or fell, the activity would increase or decrease. There would be no possibility of measuring the value in exchange, for no motive to exchange would exist. By hypothesis, the labor of the community is valuable only because it can produce the red cloth, and hence no exchange of labor for cloth would occur. The time element might induce men to trade present labor in making cloth for future labor in making cloth, or even present cloth for future labor, but Professor Clark, as a good Austrian, will see in this after all only an exchange of cloth (present) for cloth (future) and so, after all, no measurement of the value of cloth. There could be no variation in the relation between a given day's labor and a specified unit of cloth, since my hypothesis excludes "diminishing returns" from land, and assumes a constant (labor-time) cost. To the labor-time Professor Clark (as an Austrian) will attribute a value reflected from its product. I may simplify my hypothesis by making the cloth non-reproducible. Then the value cannot even be measured by its power to call forth productive activity. It will still function, however, in the care with which the community economizes in the use of the

cloth, in the concern with which the group views the wearing away of the supply, in the measure of resistance which the group might offer to enemies who sought to rob them of it, in their grief if the supply were lost. On either hypothesis, we cannot *measure* the value of the cloth in the usual way, by comparing it with some other economic good (tho exchange is not necessary for even this comparison). But is capacity for precise measurement a *sine quâ non* of existence? Is there a definite distance between the earth and the remotest star in the Milky Way? How much is it? Would the distance be altered if we measured it?

It will be seen from the foregoing, that my objections to the relative conception of value do not rest on the particular term chosen. "Purchasing power" and "ratio of exchange" seem to me alike objectionable. I have indicated this in *Social Value*. I found, however, in the notion of "ratio of exchange" certain special objectionable features, unless a prior absolute value were posited to constitute the terms of the ratio. No ratio is possible between incommensurable quantities. Milk and gold, on the basis of their conventionally measured physical qualities, are not commensurable, or if compared on the basis of weight or bulk, would be related in a different ratio from the exchange ratio which we find. Of course, there is one kind of homogeneity for all things: *everything* may be *counted*, even tho each be numbered in a different unit, and ratios may be made between the abstract numbers which the counting results in. But this gives an abstract ratio merely,¹ which, I contended, is of no use to the economist. I indicated, in the chapter on Jevons and Pareto, that their theories had developed only such abstract ratios, ratios lacking concrete terms, and that Böhm-

¹ *Social Value*, p. 22.

Bawerk, altho seeking something much more concrete, had really found nothing more. Jevons himself had recognized this very explicitly. My contention with reference to this point is not that an abstract mathematical ratio violates the canons of logic, but that, for the economist, it is meaningless; meaningless, that is, till further analysis gives it "economic quantities" for terms. Now Professor Clark appears to meet this by a plea of confession and avoidance. It is not clear to me, however, that he has done more than take the abstract mathematical ratio, rename it "rate," and propose it as the equivalent of value. I grant cheerfully the legitimacy, as a matter of logic, of his notion, but I raise the question, what use can he make of the notion?

Some things he can do with the notion, perhaps, but not many. You cannot add rates of exchange, to get a sum of values. "The questions to be answered are quantitative. . . . Reciprocal comparisons give no sums. . . . Ratios [or rates] of exchange alone afford us no answers to the economist's chief inquiries."¹ Nor, for expressions of this criticism, do I need to confine myself to those who accept fully the absolute notion of value. Professor Carver,² who defines value as "purchasing power" still finds a quantitative notion of some sort necessary. A "rate" would be of no use to him. Böhm-Bawerk criticizes the notions of "ratio of exchange," "Austauschverhaeltnis," and "Tauschfuss" (perhaps correctly identified with Professor Clark's "rate of exchange") by saying that these expressions have a peculiar shade of meaning which makes it impossible to attribute them to goods as quali-

¹ J B Clark, "Ultimate Standard of Value," Yale Review, 1892, p 258

² "Concept of an Economic Quantity," Quarterly Journal of Economics, May, 1907

ties, or to speak of a greater or less magnitude of them.¹ Böhm-Bawerk considers value (his "objective value in exchange") relative, but none the less wishes to treat it as a "Kraft oder Eigenschaft" of goods.² Professor Clark's "rate" lends itself no more than does "ratio" to the notion of money as a "measure of values." Just as it will not serve when one wishes to add items of wealth to get a sum, so it fails when one wishes a sum of value as a distribuendum for the theory of distribution. One cannot speak of value as the attribute or quality of wealth, if value be merely a "rate" of exchange. Nor can one speak of a unit of value.³ I shall not elaborate these considerations, drawn from the practical needs of the economist in handling his problems, since I have discussed this matter pretty fully in chapters 2 and 11 of my *Social Value*. I shall, however, give some illustrations of the difficulties arising in the absence of the absolute value concept that have come to my attention since the book was written.

But first, I would raise a further question: if the value of wheat be its rate of exchange, *which* rate is it? Its rate of exchange with iron, or coal, or corn, or hats? Each is a different rate. Will Professor Clark choose among them? Or will he try to average them? How *does* one average rates of exchange?⁴ Or will he confine himself to the rate of exchange with money, and limit value to money prices? Or will he say that a good has as many values as there are other goods on the market?⁵ C. M. Walsh, in his *Measurement of General Exchange Value*, treating value as a quantity rather than a ratio, a

¹ Grundzüge der Theorie des wirtschaftlichen Güterwerts, Conrad's Jahrbucher, N F, vol xiii, 1886, p 478, n

² Ibid, p 5

³ Cf Am Econ. Rev, Supplement, March, 1913, p 43

⁴ See p 707, n, infra

⁵ This is the strictly logical outcome. It is definitely stated by not a few writers, notably Davenport, *Economics of Enterprise*, p 243, and Ely, *Outlines of Economics*, 1909 ed, p 157

quantity analogous to gravity, attempts to average particular exchange values into a general exchange value, but he would not undertake that for rates of exchange.¹ These questions must be answered before "rate of exchange" can be a very important "core of economic thinking."

IV

In illustration of the difficulties which arise in the absence of the absolute value concept, I wish to call attention to a point in Professor Fisher's *Purchasing Power of Money*. Demand and supply curves, showing the determination of particular prices, in which the quantity of goods of each kind is measured along the horizontal axis, and numbers of dollars are measured along the ordinates, must always assume, (a) a fixed unit for the good in question, and (b) a fixed value of the dollar. With the notion of value as an absolute

¹ Walsh considers values quantitative, and also declares them to be relative. But it would involve a more elaborate discussion than is here desirable to take full account of his doctrines. One chief difference between his views and mine grows out of his philosophy of *quantity*. All quantities are relative for him, and value is no more relative than any other quantity. "That exchange value is a relative quantity is not a peculiarity at all. All quantities are relatively quantitative" (Op cit, p. 56). His objection to the term, "absolute," rests upon the assumption that "absolute" must mean "without relation to anything else," and that an absolute must be unvarying (Ibid, p. 66). As I do not use the term, absolute, in this way (Social Value, pp. 23-24), it is needless to discuss the matter. And as I am concerned simply with maintaining that value is a quantity like other quantities, I need not, for my purposes, quarrel with a writer who accepts this point, but treats all quantities as relative. I am, moreover, prepared to concede that for certain purposes of mensuration, leaving questions of causation aside, Walsh has developed a very useful concept. Great latitude is permissible in framing concepts when only measurement is involved.

As a matter of causal theory, I object to the strict analogy between gravity and value (Walsh, op cit, pp. 7-8) on the ground that while the relation of gravity between bodies finds its causes *within* the bodies concerned, the relation of exchange between goods is but a reflection of the more significant relations between the goods and men. It should be pointed out, too, that on the strict analogy between gravity and value, one would get a very different doctrine from the usual doctrine of relative values. e.g., a rise in the value of good A should lead to a rise, and not a fall, in the value of good B exchanged for it, just as an increase in the mass of the earth would lead to an increase in the weight of all objects in its sphere of attraction. Walsh himself does not draw this conclusion. (Cf. his chapter xiii.)

quality and quantity, this is easily managed. The same is true of the notion of cost of production: cost curves have significance only if the unit of cost, the dollar, be assumed unvarying in value.¹ Before the question of any particular price is approached, either from the standpoint of supply and demand, or from the standpoint of cost of production, *money*, and a *fixed value* of money, must be assumed.² Behind all our conventional price theory, rationalizing it and validating it, lies the notion of value, and of a fixed value of the money unit. Professor Fisher sees clearly the need for some such notion in connection with supply and demand and costs.³ But his stock of theoretical concepts includes no absolute value. He seeks to supply the lack by a process that seems to me most extraordinary. He takes an *average* of particular prices, the *general* price level, and exalts it into an independent entity, prior to and master of the particular prices out of which it is derived, of which it is a mere average. The analogy is with the sea level and the waves: "We cannot explain the level of the sea by the height of its individual waves; rather must we explain in part the position of these waves by the general level of the sea."⁴ The emergency is great, but surely the remedy too heroic! An average, an abstraction, a mere mathematical summary! *Ex nihilo nihil fit*, — there cannot be *more* in the average than there is in the particulars.⁵ The absolute

¹ I am not now considering the possibility of other cost concepts than the usual entrepreneur cost notion, and I waive a discussion of the possibility of other demand and supply notions than those commonly presented in the conventional curves

² Social Value, *passim*, esp pp 39 and 48, and ch 17

³ Op cit, pp 174-177

⁴ Ibid, p 177

⁵ I am glad to find myself in agreement with Professors Laughlin and Kemmerer in holding that this notion of Professor Fisher's is untenable. "The distinction Professor Fisher draws between the prices of individual commodities and the general price level appears to me, as to Professor Laughlin, to be untenable. It is, moreover, contradictory to his general philosophy of money. His index numbers recognize no general price level distinct from individual prices. Professor Fisher's illustration of the ocean

social value of money which my theory offers instead has been objected to as a highly theoretical notion, but it at least purports to be a living, psychological, dynamic thing, with causal efficiency, — not a mathematical average. I know nothing more metaphysical in the history of economic theory than this hypostasis of an average. It is interesting to note that Professor Fisher, in a later article, has recognized and used the absolute value concept,¹ tho in a different connection.²

Assuming value, and particularly a fixed value of money, very many economic problems may be handled by price theory, as distinguished from value theory, and without explicit reference to the value concept. Sums of dollars, of an implicitly assumed fixed value, may give all the "economic quantities" that are needed for

would be more apposite if he called it a lake whose level was continually changing, and if he considered each particular wave as extending to the bottom" Kemmerer, *Papers and Discussions*, 23d Annual Meeting of the American Economic Association, p 53 At the same time, I agree with Professor Fisher that there must be something more fundamental than the particular prices This something I find in the absolute value of money

¹ American Economic Review, December, 1914, pp 825-827

² A possible alternative interpretation of Professor Fisher's conception is suggested in two or three sentences in the passage of the *Purchasing Power of Money* I have been discussing On p 175 he makes a distinction between individual prices *relatively to each other* and the price level But the distinction which he *discusses* in the passage as a whole is between the price level and individual prices *not* considered in relation to each other Comparison, moreover, with his original enunciation of the notion (*Papers and Discussions*, 23d Annual Meeting of the American Economic Association, pp 36-37), would serve to justify the interpretation I give, as nothing at all is said there about super-ratios between individual prices But the internal evidence is even more convincing Demand and supply, and cost of production, find their problem, not in the relation between the money price of aspirin and the money price of caviar, but in the money price of aspirin or the money price of caviar considered separately Professor Fisher thus conceives supply and demand in his *Elementary Principles* (p 260) This interpretation is especially necessary, since Professor Fisher is joining issue with writers who surely use demand and supply and cost of production as means of explaining money prices, and not super-ratios between them Further, the price level is *not*, on Professor Fisher's own scheme, a factor in determining the relations of the prices of sugar and of wheat *inter se* With a given price level, wheat might be worth a dollar and sugar nine cents, and the ratio of their money equivalents would be 100 9 with a price level twice as high, wheat would be worth two dollars, and sugar eighteen cents, but the ratio between their money equivalents would be still 100 9 The whole discussion is quite meaningless unless the contrast be between concrete money prices of particular goods, and their average On either interpretation, moreover, my criticism of the exalting of the average into an entity would stand

very many problems. This is why "the practical reasoning of one school must be surprisingly like the practical reasoning of the other," as Professor Clark says. It is in the theory of money itself that the absolute value notion becomes most clearly needed, and it is by writers on money that this has been most clearly seen.¹ Writers on money whose definitions of value are of the relative type very commonly more or less unconsciously make use of the absolute notion, and sometimes make a sudden shift from the one notion to the other, when problems seem thereby solved. Professor Laughlin, *e. g.*, in his *Principles of Money*, defines value in relative terms (pp. 4-5). However, he finds the absolute notion necessary for many purposes, and in his chapter on "The True Theory of Prices," makes repeatedly the assumption that the value of gold is constant while the values of other things vary, and even the assumption that the value of gold is constant while the general price level varies, an assumption only possible on the absolute notion. (See especially pp. 352-356, and particularly 355.) On p. 342, discussing the movement of gold from gold-producing to non-mining countries, he avoids an analysis of the actual process by which prices are changed, an analysis which the quantity theorists aim to supply, by saying: "It seems quite unnecessary, then, to go through a subsequent process of comparing the media of exchange with the mass of transactions in order to produce a change in prices, or to find the cause of any alteration of prices. *The modification of value going on antecedently, for causes existing before the actual record of prices on the dial-plate of trade* [absolute value, prior to exchange], was the real price-making process, to which the media of exchange afterwards conform as a matter of course,

¹ Cf. Social Value, p. 120, n. 3.

or as a register of events. If the standard falls or rises in value, of course prices rise or fall; *that is what is meant by a fall or rise in the value of the money commodity* [relative value concept] . . . (All italics mine). While agreeing fully with Professor Laughlin that the quantity theory does not offer a satisfactory account, either of the causes or of the *modus operandi* of price changes, I would urge that the matter is not so easily disposed of as this. There is a process, which requires *time*.

It would not be difficult to multiply instances of the unconscious use of the absolute value notion at great length.¹ And the shift to the relative notion, in a more self-conscious moment, occurs not infrequently. The explicit use of the relative concept very frequently is a substitute — not chosen for that reason, of course — for analysis. Owing to the difficulty of carrying in mind in the course of a train of economic analysis all the factors on *both* sides of the price relation, the normal and proper thing is, of course, to abstract from one side, and center attention on the other alone. But this means a study of an absolute value. To apply the results of such an investigation then directly, without correcting for the abstraction, to a final conclusion as to the price relation, *on the ground that value is relative*, is to be guilty of a shift in the meaning of terms in the course of an argument.

V

Professor Clark's analogy of value with rate of speed suggests some interesting points. He recognizes that the ratio is not between time and distance, in the case of speed, but between the abstract arithmetical numbers resulting from the counting of the arbitrary units in

¹ Cf. Johnson's discussion of Davenport's usage, *Quarterly Journal of Economics*, May, 1914, pp 433-436.

which time and distance (units different of course for the two) happen to be measured. It is not unusual to find in mathematical discussion a definition of speed as a ratio between time and distance, or as the abstract ratio between the arithmetical numbers involved. This is a harmless mathematical convention, a very useful convention, as the mathematician thereby gets a symbol *representing* speed which he can put into equations, and manipulate. The convention is harmless, that is, until the mathematician, particularly the mathematical physicist, comes to using the convention as a premise in arguments about reality, and then it becomes the basis of what Bergson has called "the mathematician's fallacy" — the confusion of *measurement* with *existence*. For the ratio is *not* the speed.¹ One may make innumerable such ratios, but if no *motion* takes place, there is no speed. And doubtless a full analysis of speed would reveal some other essential elements. Speed is an aspect of a concrete process, and the ratio is a still higher abstraction from the speed, adequate not for *description*, but only for *mensuration*. The ratio is a measurement of a reality, not the reality

¹ It is interesting to note that Professor R. B. Perry, speaking from the angle of the neo-realists, would accept the view that rate of exchange is inadequate in the field of value theory, but would find in ratio between time and distance a satisfactory definition of speed. Cf. his *Present Philosophical Tendencies*, pp. 335-336, and 60-62. It is well, therefore, to differentiate the two cases. The argument against relativity is stronger in the field of value theory than in the field of mechanics. On general philosophical grounds, from the angle of pragmatism, I should attack the doctrine in both places. On methodological and psychological grounds in addition, I should attack the doctrine in economics. As to what *methodological* considerations should guide the student of mechanics in framing the working concepts of his science, I have no opinion, and no right to an opinion. My quarrel with the student of mechanics comes when he carries the working concepts of his science into the general field of philosophy, and when he seeks to make of the conventions of his science universal rules of scientific procedure. Cf. Bergson, *Time and Free Will*, *passim*, esp. pp. 117-119. Whichever philosophical view may ultimately prevail as to the nature of velocity, etc., I trust that I have made it clear that many questions must be answered before we are obliged to accept the duty of recasting economics on the model of mechanics. Even if the philosopher should finally decide that the working concepts of mechanics give an adequate ontological account of reality, including the realm of mind, the economist could still claim the privilege of framing working concepts of the sort I propose, for *methodological* reasons.

itself. When something beyond measurement is wanted, *e. g.*, an analysis of causation, then speed must be otherwise defined. That the ratio is not the speed itself is sufficiently clear when one reflects that it is pointless to ask one to measure the ratio; the ratio is the result of measurements; the measurement has been made when the ratio is stated.

The measurement of speed by this method is *unlike* the common method of measuring values. The measurement of speed takes two elements *within one given* speed, and states their relation. Measurement of value is commonly by comparing *two* values, usually in the exchange process in the case of economic values, tho other methods of comparison are possible even there. But we can also measure speeds in the same way, *e. g.*, by watching two men running together. We can ignore the absolute amount of time, and see that one covers twice as much ground as another in a given time, not knowing how long that time is. Or, we can see that one covers a given distance — how great we need not know — in half the time the other does. Or, more crudely, we can construct a scale of speeds, seeing men running, A, first, B, second, C, third, and so on, not knowing either time or distance. Something of this sort is what we commonly do with legal and moral values, — we do not so often get precise quantitative equivalents, *i. e.*, marginal prices, as we do in economic values. We may, of course, construct such scales of economic values, and this may easily happen in a communistic régime. For many kinds of measurements, particularly in the psychological laboratory — and, *par excellence*, in grading examination books — this is the best we can do. Such scales may be made of irregular intervals, but we can, under some conditions, make our measurements no more exact.

It is possible, and indeed not uncommon, in the case of individual values (as distinguished from social values), that is, values contained within a single individual mind, — to get inner measurements like that got from the inner elements in a single speed. We consciously *know* the psychological intensity for what it is — either in equilibrium with some other rival value or not. But it would not be possible to reduce the inner measurement to a ratio so simple as that between time and distance in the case of speed. One gets a total effect, rather than an analytical measurement. An interesting psychological measurement of this kind is suggested as a theoretical possibility by Professor John Dewey's analysis of "pleasurable tone" in feeling into a resultant of the proportions of *three* independent variables, themselves complex. It may be noted, also, that we have a yet simpler method of measuring speed by a sort of direct intuition — which really rests in the effort the eye and body must make in following the moving object.

VI

Professor Clark's proposed "rate of exchange" involves a good deal more standardizing and uniformity in goods than the absolute value notion does. Absolute value may be predicated of uniques as well as of members of a class. The idea of rate, moreover, has no special superiority, I think, in the case where goods sell for one price in quantity, and at a higher price in small amounts. Many writers have treated this case by saying that tho the goods sold in large quantity are physically the same goods as when sold in small quantities, they are really not the same *economic commodities* in the two cases; that there are certain advantages in

the small lot purchase which command a premium, and which, moreover, entail extra cost, so that a different value and a different ratio or rate of exchange is to be expected. I am not convinced even that "rate of exchange" is a good general equivalent of "*price*." For most purposes of the economic analysis, what is wanted is a *sum*, and price as a sum of money paid for a good (with "for a good" kept in the background of the thought in the course of the syllogism) is the most common idea of price one meets in economic writing, if I can trust my general impressions. In "rate of interest" we have a good case of Professor Clark's term, used as equivalent to "price."¹

VII

Professor Clark raises, toward the end of his paper, the fundamental questions as to how far the reasonings of the absolute value theorist, particularly the social value theorist, and the theorist with the relative value concept, will coincide, and as to whether social values are always exactly expressed in market prices. In what follows I wish to make some suggestions on these points. First, economic value is a wider notion than exchange, and value a much wider concept than economic value. Many values do not manifest themselves in exchange. The problems of exchange first forced the attention of thinkers upon the value problem, but to make that an argument for confining the value notion to exchange problems is, it seems to me, not more defensible than the effort to confine the notion of interest to the return for the loan of money. It was, to be sure, in money loans that interest first became conspicuous,

¹ Cf. Fetter, "The Definition of Price," *American Economic Review*, 1912.

and for a long time thinkers confined their discussion to that aspect of the interest phenomenon. Incidentally, these speculations remained as "barren" as Aristotle supposed money to be while the scope of the discussion was thus limited. With the broadening of the concept, the recognition of "implicit interest" and "economic interest," and the further broadening of the notion in the capitalization theory, a rich new field of economic phenomena became revealed. The gains to economic and social theory from following the value concept into its wider implications may not be as fruitful as the widening of the interest concept has been, tho I personally anticipate very important results from it; but at all events one may enter a protest against the effort to limit value to exchange merely because the analysis started there. I shall not now discuss the broadening of the value concept into a general theory of social forces. I have elsewhere discussed the notion (*Social Value*, Pt. IV) and hope to elaborate it in detail later. I think that a fruitful alliance can be made between economics and sociology at this point: economics borrowing from sociology new and wider data, qualitative principles of explanation; sociology borrowing from economics its technique of the marginal analysis. But, within the field of the economic values, I wish to give certain illustrations of the disadvantages of limiting value solely to exchange, and of judging values solely by means of prices.

First, it is clear that most forms of socialism and communism would abolish exchange.¹ Would they also

¹ This perhaps calls for a more exact statement. Exchange, in the sense of the *transfer* of goods from producer to consumer, must exist wherever there is a division of labor. In this sense, exchange would exist in a monastic community, based on the principle of the purest communism, or in a family. Cf., *Social Value*, p. 24, n. This kind of exchange, however, involves no notion of *quid pro quo*, no notion of *do ut des*, no giving up of a good by one man to another *in consideration of* the giving in return of another good. But even tho this element might be preserved in some forms of socialism, where

abolish value ? Or would values, measured in other ways than by exchange, continue to function in the guidance of social production and consumption ? We have, on the wider notion, a useful theoretical tool for discussing socialistic programs — witness Schaeffle's *Quintessence of Socialism*. Further, to the extent that collective activity encroaches on the domain of private enterprise and exchange, we shall have problems for which the strict exchange-value notion will be inadequate — as Professor Clark indeed suggests in his opening paragraph. The capitol building at Washington has economic value, has it not ? And yet it cannot be exchanged. An entailed estate cannot be sold, yet has value — a value that may manifest itself, *e. g.*, in the amount of insurance a company would be willing to write upon the buildings on it, or in the care and expense its owner would incur to conserve it. Legal abolition of exchange does not necessarily destroy economic value. A man cannot be sold, but if you kill him in a railroad accident his economic value gets a money measure. Again, value and exchangeability are not necessarily coincident. Certainly many things that have high value, as a farm, have low exchangeability, while a copper cent has high exchangeability. On this fact, Menger has constructed a theory of the origin of money.¹

labor might be exacted as a *sine qua non* of receiving goods from the social stock, with labor-checks used as intermediaries, the notion that values are determined in the *exchanging process* would not be maintained, since the terms of these exchanges would be fixed authoritatively, on the basis of some assumed principle or principles of justice or social expediency. It is my contention that economic values, perhaps by no means represented in these "prices," and having no influence on distribution, would exist and function in such a society, tending to compel a readjustment of the social apportionment of labor and capital among different occupations in production if that apportionment were not in accord with the economic values

¹ Economic Journal, 1892 It seems necessary to point out this essential lack of correlation between value and exchangeability since Mr Horace White, in his *Money and Banking* (fifth ed, p 135), identifies value and exchangeability: "Value is an ideal thing in the same sense that weight is The former means exchangeability, the latter

Now in this lack of connection between value and exchangeability comes an important difference between the absolute value notion and the relative value notions. Forced sales of land, *e. g.*, lead to prices sometimes which do not correctly express the value of the land. This is not a statement about "normal value" or "just value." I mean simply that the market is caught by surprise, and that social forces which would have led to a much higher price had they had time to operate, were forestalled in the snap judgment. You could not buy that farm from the new owner five minutes later for anything like so low a price as he paid, nor could you buy any similar farm in the neighborhood for so low a price. It is the same sort of thing that happens when a minority in a parliamentary body catches the majority napping. The point is essentially the same as that made by Professor A. S. Johnson, in his recent article¹ on Professor Davenport's *Economics of Enterprise*: the distinction between the timeless, mathematical, static equilibrium and the causal process requiring time. Economic values are, in general, the *causes* of prices. The cause changes *first*, in time, and then the effect follows later. With every change in values, therefore, there is a temporary discrepancy between values and prices. In a highly organized market, this time is usually so short as to be negligible. As most price theory has assumed a highly organized market, the notion of values as completely expressed in prices has seemed natural enough. If the social value theory be content to be a theory of only the highly organized market, it, too, may abstract from this time element. Since it wishes to be more realistic, it recognizes the time ele-

means force of gravity A dollar is a definite amount of exchangeability" Cf also Amasa Walker's contention that "exchangeable value" is tautology, equivalent to "exchangeable exchangeability!" Science of Wealth, 5th ed., p. 9

¹ Quarterly Journal of Economics, May, 1914, p. 431

ment, and a gradation in the time element, depending on the degree to which exchange has been organized, or can be made automatic, in the case of any given class of commodity. Of course many writers, as Böhm-Bawerk, have pointed out that certain prices, as those due to accident or fraud or disguised benevolence, are not "economic prices," and have then gone on to discuss "economic prices" on the assumption of the fluid market with its timeless adjustments. The social value theory, and the absolute value theories in general, do not need to make so sharp a sundering between "economic prices" and non-economic prices, but may recognize a gradation in the degree of control which values have over prices, and in the amount of time which the perfect adjustment requires. The theory of value is essentially a theory of *causation*.

Further, there is often a hiatus between actual price and the price which would correctly express economic value, because the price is controlled, in part or in whole, by a value of a non-economic sort. The price itself may become an object of value, may become conventionalized, made sacred or at least tenacious, by the influence of custom or tradition, or even may be directly prescribed by law. In such cases, it is worth while to make a distinction between two cases: (a) where the economic values tend to *raise* the price but are checked, and (b) where the economic values are checked in their tendency to *lower* the price. In the latter case, adjustment is easy, and prices do correctly express values, in very many cases, because, if the supply of the good in question is dependent on continuous production, the productive factors may be diverted to other employments, and the supply shortened, until the values are brought into harmony with the prices. This would not be possible, of course, where such a shifting is not pos-

sible. A minimum wage law, *e. g.*, would be easier to enforce by far in a single industry than over the whole field. The value of labor might be brought into perfect correspondence with a minimum wage in a given industry; if such a law were enforced over the whole field, some laborers might get a wage exceeding the measure of their value. But this does not mean that such a law could not be enforced. Economists have often spoken of the helplessness of law when in opposition to economic forces, but what we practically get in such a case is a conflict between values which tend to move prices in opposite directions, with a marginal equilibrium between them. I do not wish to go far into the theory of the minimum wage here, and shall illustrate by some simpler cases the control of prices by law or other non-economic values in opposition to economic values. Where, as in case (*a*), the economic values tend to *raise* prices, but law seeks to check the tendency, we have had our most strenuous insistence on the powerlessness of law. The English "Statutes of Laborers" have been cited again and again as evidence of the powerlessness of such laws. And yet I think it perfectly certain that these laws were not without effect. They did not perfectly control the price of labor; wages rose more or less steadily during the period of their operation. But it surely cannot be contended that they did not delay the process, that at many points wages were not kept to the statute rate because of the statutes; that, in fact, you had a shifting marginal equilibrium between the social forces in the economic value and the social forces in the law, an equilibrium expressed in the price of labor, and varying as the one force or the other gained or lost in magnitude. A modern case may be suggested. Suppose that railroad freight rates are legally fixed at a point lower than necessary to provide

the facilities for which the shippers of a given region are willing and able to pay, so that competition among shippers would lead to the offering of prices higher than the legal rates if the railroad were free to accept them. Suppose, however, that the regulating authorities have full access to the railroad's books, and have power to punish with imprisonment any deviation from legal rates. Will economic values control prices here? Will there not be a divergence between values and prices? The economic values might lead to higher prices paid, not to the railroad, but to speculators who had chartered cars, if that were feasible. The economic values might function in the bribing of employ  s to give preference to one shipper over another. But the aggregate amount paid for a given amount of transportation would be much less than would be the case if the values were free to work unobstructed. A similar situation arises in the efforts of theatres to prevent speculation in their tickets, to interfere with the free play of economic values in controlling prices. These efforts are less successful than I have assumed would be the case in the illustration just given, partly because the efforts are often not very sincere, and partly because the moral and legal values supporting such efforts are not strong. In the case, however, of the price of tickets at the Harvard-Yale football game, where a powerful sentiment exists among the students of the Universities as to the impropriety of ticket speculation, and where the fear of being excluded from future privileges of buying tickets is real, the non-economic values resist very powerful economic values, and the price of tickets remains pretty much where it is placed by the athletic authorities. These are cases where exchange-relations do not adequately represent economic values. Would Professor Clark give a different answer? To be consistent he would have to do so.

Many writers on the theory of value have been disposed to put these cases aside as not coming in the purview of a theory of value. Thus J. S. Mill ¹ goes so far as to limit his treatment to competitive prices only, holding that no laws are possible otherwise. If the social value theory chose to limit its problem similarly, it would have much easier sailing. It seeks, however, to be more realistic than that. But it may be observed that those who define value in terms of exchange have no right to ignore these cases, for real exchange does take place here. And the relative conception must be, not merely as *narrow* as exchange, but also as *wide* as exchange. The social value theory, putting law, moral forces, and economic values into the same general class, makes it possible to treat these cases by an extension of the marginal analysis, and is not obliged to ignore them, or to put them aside into a category of things which it is bad form to discuss, because there is "no apparent method of bringing this class of facts within the orderly sequences of economic law." ¹

VIII

Professor Clark's "power-to-chop-wood" illustration suggests a point with reference to the notion of value as "power in exchange." Power to chop wood, if all the wood be of the same kind, all equally free from knots, if the ax be kept at a given sharpness, and the weather conditions do not change, may be considered adequately measured in the size of the pile of chopped wood, and men's power in this particular — or their strength in general, if this be the only possible mani-

¹ Principles, Bk III, ch i, par 5

² Davenport, Value and Distribution, p 560 This passage appears in a different connection, but illustrates the same methodological view-point as that here criticized

festation of strength — may be safely compared on this pragmatic basis. But the notion of power in exchange is no such simple notion. For a good, say a bushel of wheat, may have power to purchase a hat, or a pig, or a day's labor, or a dollar. Is it the same power in all these cases? How assert this, unless the resistances overcome in each case are in some way equal — unless the various alternative goods named have some common quality with respect to which equality may be asserted? Does not the notion of power in exchange thus require the more fundamental value notion for its validation? The resource, questionable on other grounds, of saying that these various goods are all equal in *power in exchange itself* is not open, if one gets away from the unrealities of the assumption of a fluid market where everything has perfect exchangeability, because a test would show that they are not perfectly interchangeable, that you cannot necessarily trade wheat for pigs, just because you could trade pigs for hats and then hats for wheat. The "want of coincidence in barter," one of the commonplaces in the theory of money, is a fact by no means entirely removed by the use of money, and prevents the possible funding of diverse goods on the basis of "power in exchange" alone. Even if that resource were not thus precluded, it would still be either mere tautology, or else a vicious circle,¹ to use it.

IX

As illustrating what can be done when the relative notion of value is applied with entire consistency, I wish to call attention to a striking point in Professor Schumpeter's novel theory of interest, set forth in his *Theorie der Wirtschaftlichen Entwicklung*. Professor

¹ Cf Social Value, pp 18-19

Schumpeter's main thesis is that interest is a phenomenon of economic evolution, that it grows out of business profits, and that it would disappear if evolution ceased. There would be no interest in the "static state." In the static state, the imputation process would lead all values back to the original factors of production, land and labor, leaving no source from which interest could come. He is met with the obstacle, however, that in that case the land would have an infinite value, since if we attribute, undiminished, to the land all the value of all the future services of the land, services which may be expected to continue through unlimited time, even a small rent of a small piece of land would mount to an infinite sum. The capitalization theory would see in the absurdity of this conclusion sufficient evidence that interest would survive, even in Schumpeter's static state, as a factor in the capitalization process, as a *rate of discount* to be applied to the future rents of the land, reducing the otherwise infinite capital value to a finite sum, the limit of an infinite *convergent* series. Not so, Schumpeter answers. The land has neither a finite nor an infinite capital value. The land has no capital value at all! The land is not *exchanged* as a whole, but only the yearly rents are sold. Where no exchange takes place, no value exists. And, in the static state there is no occasion, as a consequence of the static hypothesis, for land to be sold.¹ At the application of the absolute value notion, this whole fabric melts away. Whether or not the situation calls for changes in land ownership by exchange, the land

¹ "Der Boden dagegen wird im normalen Kreislauf des wirtschaftsprozesses nicht veraussert, sondern nur seine Leistungen. Nur deren Werte und nicht die Bodenwerte als solche sind daher Elemente der Wirtschaftsplane. Und die Vorgänge des normalen Kreislaufs können uns nichts über die Wertbildung des Bodens lehren. Nur die Entwicklung schafft den Bodenwert, sie 'kapitalisiert' die Rente, 'mobilisiert' den Boden. In einer Volkswirtschaft ohne Entwicklung würde der Bodenwert als allgemein volkswirtschaftliche Erscheinung gar nicht existieren." Op cit., p. 334

has a capital value, and one which can be calculated by the method of the capitalization theory. That value would manifest itself in the expense which would be incurred to protect land in the Missouri River bottom from being washed away by a shift in the current, if so indecorous a thing as a shifting current could exist in the "static state,"¹ and would also receive a pretty precise test in the amount of capital that could be borrowed (or, if already borrowed in the pre-static state, could be kept as a loan) on the basis of a mortgage on the land. In any case, less precisely measured, it would exist as a psychological attitude of the group toward the land. It would be considered valuable, and not infinitely valuable. Schumpeter's argument is perfectly logical on the basis of the relative concept. Will not this make the capitalization theorists a little more friendly toward the non-relative notion? The capitalization theory has always been presented as part of the general body of static, abstract theory, independent of the notion of economic change.²

X

To summarize: while recognizing and insisting that the formal and logical aspects of value theory must be divorced as far as possible from the question of causal theory, I do not believe that the two aspects can be entirely divorced. My main argument, however, has

¹ To make my illustration of the shifting current meet the most rigorous tests of the most heroic static conception, I shall assume that the current shifts in a hundred year cycle, endangering every piece of land in the river bottom once every hundred years. I shall assume that the cycle is perfectly understood, and that every land-owner knows exactly when, and to what extent, he will be endangered. This leaves nothing to chance or uncertainty or ignorance. The economic life of the community runs smoothly on even keel in a static equilibrium. And yet, once every hundred years, without exchange, the capital value of every piece of land in the river bottom is tested and measured.

² For the sake of record, I wish to express considerable doubt as to the adequacy of the capitalization theory *outside* the static state!

rested in logical and methodological considerations, particularly in connection with the actual use of the value concept in specific economic theories. The cases discussed may be offered, not merely as illustrations of my abstract reasoning, but in part as inductive proof of the doctrine maintained. "The relativity of value" has a number of different meanings, and different philosophic roots: one root is in the false psychological theory that *contrasts* constitute the essence of consciousness; another root is in the geometrical theory of the relativity of space; another root, leading to a different kind of relativity notion, is the idea of a definitely fixed sum total of psychological energy. Some writers seek to rest the case for relativity on a badly made dictionary. Common to most forms of the relative theory of value are the (a) contention that values cannot simultaneously rise or fall, and (b) the contention that if one piece of wealth existed alone, it could have no value. The absolute notion of value denies both these contentions. It finds values manifesting themselves not merely in comparison and exchange with other values, but also, and more fundamentally, in influencing the conduct of men. The relative theory involves the confusion of existence with knowledge of existence, and of quantity with measurement of quantity. Thus "purchasing power" and "ratio of exchange" are alike untenable notions, if treated as ultimate: both need behind them an absolute value to give them *locus standi*. The "ratio" notion, however, because of its more precise mathematical character, makes this need more evident, unless the ratio is to be a ratio between pure, abstract arithmetical numbers, in which case it is of little if any use to the economists — a contention which is made even by those who define value as "purchasing power," notably Carver, Böhm-Bawerk

and Walsh. "Rate of exchange" is no more useful from this angle than "ratio of exchange." "Rate of exchange" affords no homogeneous quality among the diversities of the concrete forms of wealth, present in each in definite quantitative degree, by virtue of which items of wealth may be compared with one another, added to make sums, treated as a distribuendum for the imputation analysis, etc. Nor can "rates of exchange" even be averaged.¹ In illustration of the difficulties which lack of the absolute value concept involves, I have cited Professor Fisher's doctrine of the independence and priority of the price level with respect to the particular prices, a device for making good the lack of an absolute concept; and the partly unconscious use, by Professor Laughlin, of the absolute concept, with a shift, in the course of the argument, to the relative notion. It is in the theory of money that the absolute concept, explicitly held, is most necessary, an implicit assumption of a fixed value of money serving adequately for most other purposes of price theory. I have contrasted the measurement of speed with the measurement of values, on the basis of Professor Clark's illustration, pointing out that a fallacy, "the mathematician's fallacy," is involved if either speed or value be *identified* with a rate or ratio. Finally, in answer to the question as to what practical difference is made whether the relative exchange concept, or the conception of value as absolute, prior to exchange, be held, the following points are

¹ The averaging for purposes of index numbers is, not of rates, or ratios, but of one term of the rate or ratio, that, namely, which numbers the units of the single commodity which is being measured by the index number, usually money. The other term is really not representative of a true quantity at all, it is not apples *plus* wheat *plus* shoes, etc., but apples *and* wheat *and* shoes, etc., each in definitely stipulated quantity measured in terms of its own unit. If any one of these elements in the "composite commodity" varies, you have not a quantitative variation in a homogeneous sum, but a new composite, incomparable with the old — except that for purposes of practical measurement we may often safely abstract from this theoretical consideration. The *relations* between money and the goods cannot be averaged. The only thing to suggest this possibility is the mathematical *convention* treating ratios like fractions.

submitted. (1) Economic value is a wider concept than exchange, and would hold, *e. g.*, in a socialist economy. Value is a wider concept¹ than economic value. In the value concept is a useful unifying principle for all the social sciences. (2) Value and exchangeability are different notions, and do not vary together. Hence the distinction between two viewpoints, the timeless equilibrium assumed by abstract price theory, and the notion of a causal process in price determination, requiring time, becomes important. Normally, values are the causes of prices, and change first. (3) Many prices are controlled, in greater or less degree, by non-economic values, so that they express, not economic values alone, but a marginal equilibrium between economic and non-economic values. (4) On the basis of Schumpeter's theory of interest, it is suggested that the capitalization theory is bound up with the absolute notion of value, and is harder to defend on the relative notion.

In conclusion, I wish to record my appreciation of the honor Professor Clark does me in discussing my theories, and my admiration for the vigor and clearness with which he maintains a view in which I cannot concur. I have not anywhere read a stronger presentation of the case for the relative notion, nor have I anywhere read an argument from that standpoint which seems to me so sympathetic and catholic in its evaluation of the doctrines it opposes.

B. M. ANDERSON, Jr.

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¹ In connection with the social value doctrine, I would especially refer to three very important articles by Professor C H Cooley "Valuation as a Social Process," *Psychological Bulletin*, December, 1912, "Pecuniary Valuation as an Institution," *Am Jour of Sociology*, January, 1913, "The Sphere of Pecuniary Valuation," *Ibid*, September, 1913.